REMARKS

Applicants have now had an opportunity to carefully consider the Examiner's comments set forth in the Office Action of June 18, 2004.

All of the Examiner's objections and rejections are traversed.

Reexamination and reconsideration are respectfully requested.

The Office Action

Claims 1, 4, 5, 9, 10, 13 and 14 stand rejected under 35 U.S.C. §102(a) as being disclosed by Bagley (EP 690415, a.k.a. U.S. Patent No. 5,734,761).

Claims 2, 3 and 11 stand rejected under 35 U.S.C. §102(b) as anticipated by or, in the alternative, under 35 U.S.C. §103(a) as obvious over Official Notice.

Claims 6 and 7 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Bagley as applied to claim 1, and further in view of U.S. Patent No. 6,678,397 issued to Ohmori et al. (hereinafter Ohmori).

Claims 8, 12 and 15 stand objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 1-15 remain in this application.

Claims 16-25 were previously canceled without prejudice responsive to an Office Action mailed March 18, 2004 requiring an election to a Restriction Requirement.

The Art Rejections

In rejecting independent claims 1 and 13, the Examiner cites Bagley as disclosing the claimed limitations. The Examiner, however, has failed to show where Bagley teaches or fairly suggests converting the scanned document into structured representations of the bitmapped image. The Examiner makes reference to col. 2, lines 49-65 of Bagley, asserting that interpretation, as taught by Bagley, corresponds to the converting limitation of claim 1 of the present application. The interpretations taught by Bagley, however, do not disclose or suggest the converting step of the present application.

Bagley describes an interpretation as "a predetermined relationship between graphical objects as well as various editing operations that can be performed" (col. 2, lines 52-54). This definition of interpretation as taught by Bagley is different than Applicant's converting step in at least two respects. First of all, while Bagley describes

the relationship between graphical objects as predetermined, the converting step of claim 1, as amended, deals with perceptually salient structures of the bitmapped image that are determined according to concepts taught in the specification. The perceptually salient structures are not predetermined as described by Bagley.

A second difference between Bagley's interpretation and Applicant's converting step of claim 1, as amended, lies in the difference between the graphical objects of Bagley and Applicant's claimed structured object representations. Applicant's perceptually salient structures are symbolic representations of the structure which are editable by a structured text/graphics editor. Bagley's graphic objects, on the other hand, are described as binary raster arrays (col. 6, lines 44-50) or, in other words, bitmapped graphic objects. The symbolic representations as recited in claim 1, as amended, while they may be viewed as images, are symbolic representations of the image as set forth in paragraph 35 of the present application.

As further described in paragraph 36, this further permits manipulations not possible with a non-converted bitmapped graphic object. For example, paragraph 45 offers an example of maintaining handwritten material as is, but changing the dashing and line thickness of the hand-drawn rectangle. This feature is not taught or suggested in Bagley which is particularly directed to manipulation of text contained in a scanned document (col. 4, lines 40-42 and col. 5, lines 35-47), and does not describe operations on graphical objects other than text, and even then, seems only to describe selecting, moving, deleting, copying, character parsing, and similar operations on text objects (col. 7, lines 30-55).

For the reasons described above, Applicants submit that claims 1 and 13 of the present application, as amended, distinguish over the cited art and are in condition for allowance.

With reference now to claim 4 of the present application, the Examiner cites Bagley's classes (col. 2, line 66 – col. 3, line 16) as corresponding to Applicant's multiple alternative interpretations as recited in claim 4. However, in the cited text, Bagley describes only two classes, namely set interpretation and sequence interpretation. Neither of these interpretations deal with or relate to making "explicit multiple, possibly conflicting, possibly overlapping, perceptually significant visual objects implicit in a raw bitmap image" as set forth in paragraph 47 of the present application. Figures 3B-3H further clarify that the multiple alternative interpretations reflect various possible desired outputs as described in paragraph 45. Bagley, however, is describing

editing operations that can be performed on the graphical objects (col. 3, lines 17-21). For example, an "operation that can be performed within a set interpretation is to move the graphical objects to another location within the document plane" (col. 3, lines 1-4). Bagley does not teach or suggest a system or method for presenting multiple, possibly conflicting, interpretations to the user. For this reason, Applicants submit that claim 4 is patentably distinct over the cited art, and is in condition for allowance.

Similarly, with respect to the Examiner's rejection of claim 5, the informal and formal structured object representations of the present application, as recited in claim 5 and described in paragraph 43, differentiate between interpretations which may be rendered to have "formal" (geometrically precise or exact) and/or "informal" (approximate or geometrically imperfect) representations of graphical and textual material. An example provided in paragraph 43 is that of a rectangle drawn with mechanical drafting tools, or else rendered on a computer printer from a computer program that references geometrically precise coordinates, which would be considered "formal", while a rectangle sketched by hand would be considered "informal." Bagley's interpretations, however, as the Examiner pointed out in the Office Action, deal with unordered and ordered collection of graphical objects, which are unrelated to the concept of formal and informal representations as recited in claim 5. For this reason, Applicants submit that claim 5 is patentably distinct over the cited art, and is in condition for allowance.

Claim 9 was rejected by the Examiner for reasons similar to claim 5, and it is respectfully submitted that claim 9, like claim 5, is also in condition for allowance.

With reference to claim 7, the Examiner asserts that Ohmori discloses forming an alternative graph in col. 12, lines 1-12, which makes reference to Figures 16 and 17 of Ohmori. There appears, however, to be no suggestion or hint in the cited section of Ohmori of the concept of alternatives. Figures 16 and 18 merely display windows indicating the start and stoppage of a pre-readout process, while Figure 17 merely displays a status bar indicating progress. The alternative graph recited in claim 7 of the present application, and initially described in paragraph 47, is a data structure which makes explicit multiple, possibly conflicting, possibly overlapping, perceptually significant visual objects implicit in a raw bitmap image. The alternative graph, for example, as described in paragraph 48, contains four kinds of nodes, namely: OBJECT, GROUP, CHOICE, and ALTERNATIVE nodes. The corresponding exemplary alternative graph shown in Figure 5 of the present application is clearly unrelated to the

simple status bar described by Ohmori. Therefore, Applicants submit that claim 7 patentably defines over the cited art, and is in condition for allowance.

Applicants appreciate that the Examiner has stated that claims 8, 12 and 15 would be allowable if rewritten independent form including all of the limitations of the base claim and any intervening claims. However, Applicants submit that the independent base claims 1 and 13, as amended, are in condition for allowance, and it follows, therefore, that dependent claims 8 and 12, depending respectively through intervening claims 7 and 11 from base claim 1, and claim 15, depending through intervening claim 14 from base claim 13, are in condition for allowance as originally submitted.

Applicants further submit that claims 2, 3, 6, 10 and 11, depending from independent claim 1, are in condition for allowance, as is claim 14, depending from independent claim 13.

Prior art considered pertinent to the applicant's disclosure and made of record, but not relied upon by the Examiner, has been reviewed by the applicant. The applicant submits that these references alone or in combination do not teach the present invention.

CONCLUSION

For the reasons detailed above, it is respectfully submitted all claims remaining in the application (Claims 1-15) are now in condition for allowance. The foregoing comments do not require unnecessary additional search or examination. No additional fees are believed to be required for this Amendment A, however, the undersigned attorney of record hereby authorizes the charging of any necessary fees, other than the issue fee, to Xerox Deposit Account No. 24-0037.

In the event the Examiner considers personal contact advantageous to the disposition of this case, he/she is hereby authorized to call Mark Svat, at Telephone Number (216) 861-5582.

Respectfully submitted,

FAY, SHARPE, FAGAN,
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Nov 8th, 2004
Date

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